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Approved For Release 2003/11/06 : CIA-RDP84-00933R000400120020-5

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PLANNING FOR NFAC ADP RESOURCES

DURING THE 1980s

4 FEBRUARY 1981

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*Temporarily removed  
with Dec on 11 Feb 81*

NOTE FOR: DD/ODP *ST*

SUBJECT : NFAC ADP Resources Paper for the 1980s

*Ed:*

Sue and I have reviewed  paper on NFAC ADP resources (4 Feb 81 version). The following are our combined comments.

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1. The SAFE/ADSTAR role in NFAC is hardly mentioned. It certainly will require NFAC resources in the 80's.
2. The requirements to support a doubling of investment in the 80's are not presented (they apparently will be discussed in the forthcoming five year ADP plan.) Trends in NFAC ODP and ADP resource utilization might have been useful.
3. There is no mention of any significant decentralized NFAC ADP capabilities.
4. The paper reflects a strong reliance on ODP:
  - a. Eight (8) additional personnel on rotation by FY 1983. (How are we to provide the bodies?)
  - b. Look to ODP and Contractors for Minicomputer Support. (It's not clear what we can provide.)
  - c. Training in RAMIS and BASIC. (Does ODP support BASIC in any meaningful way on the central service?)
  - d. To accept NFAC ADP personnel on "reverse rotation." (This seems reasonable.)
5. There is, however, no mention of the use of ODP resources during the 1980's. (Again, maybe the five-year plan will address this.)

Missing are:

- a. Growth projection for each ODP Service.
  - b. ODP manpower requirements projection.
  - c. Special purpose hardware/software; e.g. graphics, HSTS, etc.
6. NFAC should address some other planning issues as well.

- a. Utility of an NFAC-wide ADP Group (analogous to IMS). This group could also be the focus of NFAC SAFE activities.
- b. Contractor vs staff issues.
- c. Willingness and capability of ODP to provide increased applications support in the 80's.
- d. Tasking of ODP for the development of NFAC administrative data bases.
- e. Printing/publishing issues.

In summary, I am not clear as to the purpose of this paper. It seems to be a first step in looking at some ADP personnel and organizational issues in NFAC. Until we have a more complete picture (of NFAC ADP requirements and plans), it is difficult to give meaningful comments. Paragraph 4 above lists requirements on ODP and perhaps we could comment on our ability to satisfy those.



Rich

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# 1. INTRODUCTION

This paper provides NFAC's current investment in ADP, addresses its major ADP problems, and provides some recommendations. These recommendations are provided as points of discussion for the upcoming NFAC Program Conference. The NFAC Five Year ADP Plan, to be generated in the coming weeks, will address NFAC's specific ADP requirements from FY 1983 to FY 1987.

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2. FY 1980 ADP INVESTMENT FOR AND BY NFAC ☐

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NFAC's experience over the past decade makes it clear that one of the primary strategies for increasing productivity of analysts and improving the confidence level and quality of our research is by increased use of computer-related analytic tools. During the past ten years, NFAC as a directorate, has emerged as the largest consumer of the Office of Data Processing's (ODP) resources. In FY 1972 the DDI consumed only 9% (third among the directorates) of ODP's resources compared to 31% (largest among the directorates) of ODP's resources for NFAC during FY 1980. ☐

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3. ADP IN NFAC DURING THE 1980s ☐

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A. Is NFAC's FY 1980 ADP Investment Enough for the Future?

Absolutely not! Additional ADP support will be necessary for NFAC as the volume of intelligence-related information grows in accordance with the improvement and refinement of new and existing collection systems and the development of new analytical methodologies. ☐

Project SAFE will provide a major new ADP capability for NFAC analysts during this decade. NFAC will need substantially increased ADP capabilities beyond SAFE, however. More sophisticated



military, economic and geographic problems will require greater ADP capacity. It is conceivable that the ADP investment by and for NFAC in hardware and software will easily double in the 1980s as it did during the 1970s. ☐

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Analytic Tools Working Group ☐

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Looking beyond ADP support using existing and traditional means, experimental ADP/analytic tools for analysts are now being addressed by a joint ORD/ODP/NFAC working group. This working group should lead toward controlled growth and improved management of experimental analytic tools and encourage more innovation and communications between NFAC users and ORD and ODP. Previously, experimental analytic tools were addressed for and by NFAC through various means and facilities. The group will focus first on NFAC's requirements for analytic tools and then look toward the determination of a systematic and focused means of satisfying those requirements. ☐

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B. ADP Hardware Support in/for NFAC ☐

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Evolutionary upgrades and additions to the ODP systems (e.g. multiprocessed VM in mid-1981) based upon requirements such as those provided in the NFAC Five Year ADP Plan, will continue to accommodate most of NFAC's ADP hardware requirements. There

will be some distributed capability in the Agency and NFAC during the 1980's (e.g. the ODP standard terminal and other minicomputers), but most requirements can best be satisfied by a strong ODP central processing capability. ☐

Minicomputers ☐

ODP has a responsibility to perform feasibility studies on ADP requirements and determine whether those requirements are best satisfied by the ODP central facility or by a distributed (e.g. a minicomputer) or other approach. NFAC offices should work through the NFAC ADP Coordinator in developing their requirements and in gaining assistance from ODP. The offices should focus on providing ADP requirements, rather than requests for specific hardware solutions, to ODP. Requirements for specific features of a minicomputer which are not available through the ODP central facility are used by ODP as justification when a minicomputer solution is recommended. ☐

NFAC currently has almost no internal ADP persons trained in the development of minicomputer systems. To utilize NFAC personnel in this fashion would be costly in terms of manpower. Also, successful minicomputer systems in NFAC have been developed for NFAC by ODP and/or by private contractors. Consequently, given the heavy growth in ADP requirements in NFAC in general, it is advisable to look toward the development of NFAC minicomputer systems only through external (e.g., by ODP and/or by private contractors), rather by NFAC personnel. ☐

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C. ADP Software Support in/for NFAC ☐

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Software development and maintenance are special problems. In fact, software support is and will be NFAC's major ADP problem during this decade. NFAC must face this problem now if it is going to be able to meet its ADP requirements in the 1980's. NFAC software development is currently performed in three ways: (1) software development by ODP for NFAC, (2) software development by NFAC personnel (and by ODP personnel on rotation to NFAC), and (3) external contracting for software development. ☐

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Increased ODP Applications Software Support ☐

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ODP is providing a significant portion of its total Agency applications support to NFAC. For example, in October 1980, ODP had 53 software development/enhancement tasks underway for NFAC. This consisted of 19 tasks for OSWR, 5 for OSR, 3 for OIA, 1 for OCO, 3 for O/NFAC, 6 for OGSR, 14 for OCR, 1 for OPA and 1 for OER. NFAC is the second largest user of ODP personnel services; accounting for almost 1/3 of the manpower in ODP applications. Due to NFAC's increasing software requirements NFAC will be highly supportive of ODP efforts to increase ODP applications manpower. In addition to providing ODP requirements for additional software support, NFAC must address means of increasing software support within NFAC. ☐

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Increased Rotations



One means of providing substantial increases in software (and hardware) and ADP project management support to NFAC in the 1980s is through the rotation of additional ADP professionals from ODP into NFAC slots. Table 3 indicates that by FY 1983 NFAC will be asking for ~~several~~<sup>eight</sup> additional ADP professionals on rotation from ODP. Rotational assignments from ODP provide NFAC with a means of satisfying NFAC ADP requirements with ODP personnel on-site. The ODP career service provides career management for ODP persons on rotational assignments. Such arrangements can provide the right ADP skills for NFAC offices on a continuing basis (ODP will keep a rotational position filled) and maintain the rotatee in his/her parent ADP career service. ☐

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The eight additional rotational positions in NFAC consist of two positions in OSWR to support scientific programming, one position in OPA to support analytic aids development, two positions in OER to support economic applications, two positions in OGSR to support cartographic applications, and two positions in OCO to support data base and systems applications. ☐

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## ODP ROTATIONS INTO NFAC SLOTS



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	<u>ROTATIONS IN JANUARY 1981</u>		<u>ADDITIONAL ROTATIONS BY FY 1983</u>		<u>TOTAL POSITIONS BY FY 1983</u>
O/NFAC	1	+	0	=	1
OCO	0	+	2	=	2
OCR	1	+	0	=	1
OER	2	+	2	=	4
OGSR	1	+	1	=	2
OIA	0	+	0	=	0
OPA	0	+	1	=	1
OSR	1	+	0	=	1
OSWR	0	+	2	=	2
NIC	0	+	0	=	0
CRES	<u>0</u>	+	<u>0</u>	=	<u>0</u>
	6	+	8	=	14

Table 3

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Emphasis on Training ☐

More and more persons in NFAC offices are learning RAMIS and other high level languages and performing applications such as small (a few hundred data items and no external interfaces) data bases. This trend should continue with increased training of NFAC personnel in languages such as RAMIS and BASIC until each NFAC office is self-sufficient relative to its small data base requirements. Such training should be coordinated by the NFAC ADP Control Officer. ☐

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Standardization ☐

The NFAC ADP Control Officer is currently coordinating the requirements for administrative data bases in NFAC. Two NFAC-wide data base administrative systems are under development (one personnel-related being developed by OPA and the other production-related being developed by ODP). Also, the NFAC ADP Control Officer has compiled a catalog of existing administrative data bases to help eliminate future duplication of effort.

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Much of the software support load on NFAC and ODP is in software maintenance. As one means of easing the software

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maintenance load on NFAC in the future, the NFAC ADP Control Officer will be coordinating with the NFAC offices NFAC-wide documentation and software development standards. ☐

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The above items are in concordance with DCI guidance (for formulation of the National Foreign Intelligence Program, FY 1983-1987) in that management of software will increase and consume a larger proportion of total resources allocated to ADP and related telecommunication services. The guidance also encouraged efforts to standardize software. ☐

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Recommendations:

1. Through training in the use of high level languages such as RAMIS, each NFAC office should become self-sufficient in the development of small data base applications by FY 1983. ☐

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2. For scientific software development and maintenance and for large data base software development and maintenance, NFAC offices should continue to look toward a mix of ODP, internal NFAC programmers and contractors. ☐

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3. NFAC should provide slots and a requirement should be levied upon ODP for eight additional ODP ADP careerists to rotate to NFAC during FY 1983. ☐

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D. ADP Personnel in NFAC ☐

NFAC offices now have internal ADP personnel at levels ranging from 40 work years in FY 1980 for OCR to 0 work years in FY 1980 for the NIC, and with grades ranging from GS-06 to GS-15. Also, hundreds of non-ADP NFAC personnel access the ODP systems through terminals and many of these non-ADP persons also develop small data bases and other software applications. ☐

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Exchanges and rotations into and from ODP and among NFAC offices should be used as a primary means of providing career growth opportunities for ADP NFAC personnel. It isn't practical, due to limited resources, to provide complete ADP career paths in each NFAC office. When an NFAC ADP person has "topped-out" at, for example, a GS-09 level in an NFAC office, that person should have the opportunity, if his/her performance warrants, to rotate to a higher slot in another NFAC office or ODP. ☐

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NFAC also should develop career opportunities within those offices that need to retain the skills of those NFAC analysts who have developed unique capabilities. The establishment of several GS-15 level, non-managerial, senior ADP/analyst positions would encourage the development of this expertise at the office level to deal with the articulation of the increasing number of complex

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ADP/analytic requirements. They would also provide growth potential for NFAC ADP/analytic personnel and would provide slots for rotation of senior ODP programmers/analysts in NFAC. ☐

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OPA/AMERS has supported some of the data base development requirements of D/NFAC and some of the data base requirements of other NFAC offices with limited programming resources. OPA/AMERS has indicated a desire to provide programming support to the joint OGSR and OPA social science research effort. Although the ADP requirements for the joint effort are still evolving, it appears that cartographic-related ADP applications can best be provided by OGSR while other ADP support can best be provided by OPA. Such an arrangement would minimize duplication of effort. One ADP GS-10 slot should be provided to OPA for support to the joint effort and quick response data base requirements of D/NFAC. ☐

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Recommendations:

1. Non-managerial ADP/analytic GS-15 slots (e.g., in OER and OSWR) should be established in NFAC. ☐

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2. Rotations and exchange of ADP personnel at all levels between ODP and NFAC and among NFAC offices should be increased. ☐

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3. OPA/AMERS should be provided with an ADP GS-10 slot to support the joint OPA/OGSR social science research effort and to support quick response D/NFAC data base programming requirements. ☐

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## ROUTING AND RECORD SHEET

SUBJECT: (Optional)

Review of Draft NFAC ADP Paper

FROM:

NFAC ADP Control Officer  
Room 2F24 Hdqts.

EXTENSION

NO.

DATE

5 February 1981

TO: (Officer designation, room number, and building)

DATE

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FORWARDED

OFFICER'S INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)

1. DD/ODP

6 Feb

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1 and 2.

2. D/ODP

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2/5

3. EO

8 Feb 81

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4. file NFAC

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I would like to provide a version of the attached to the NFAC Office Directors prior to the NFAC Office Directors Planning Conference beginning on 18 February 1981. The attached is intended to provide background and points of discussion for this conference. (It is not the NFAC Five Year ADP Plan.) Accordingly I'm requesting that you review and comment on the attached by COB 10 February 1981. I apologize for the short amount of review time.

Thanks,

201 Copies to DD/A and DD/P for comment. \* Significant MZ career management issues herein, but very initial (hasty) reading did not reveal anything I would object to. ASJ

\*Comments due to you by noon 2/9.